

Product datasheet

Recombinant human Myosin light chain kinase/MLCK protein ab55674

[1 References](#) [3 Images](#)

Description

| | |
|----------------------------|--|
| Product name | Recombinant human Myosin light chain kinase/MLCK protein |
| Biological activity | Specific Activity: 200nm/min/mg. |
| Purity | > 95 % Densitometry. Affinity purified. |
| Expression system | Insect cells |
| Protein length | Protein fragment |
| Animal free | No |
| Nature | Recombinant |
| Species | Human |
| Amino acids | 1425 to 1776 |
| Tags | GST tag N-Terminus |

Specifications

Our **Abpromise guarantee** covers the use of **ab55674** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| | |
|-------------------------|---|
| Applications | SDS-PAGE Functional Studies |
| Form | Liquid |
| Additional notes | ab60014 (Mouse MYL9 full length protein) can be utilized as a substrate for assessing Kinase activity Previously labelled as Myosin light chain kinase. |

Preparation and Storage

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|------------------------------|--|
| Stability and Storage | Shipped on dry ice. Upon delivery aliquot and store at -80°C. Avoid freeze / thaw cycles. pH: 7.50 Constituents: 0.0038% EGTA, 0.00174% PMSF, 0.00385% DTT, 0.79% Tris HCl, 0.00292% |
|------------------------------|--|

EDTA, 25% Glycerol (glycerin, glycerine), 0.87% Sodium chloride

This product is an active protein and may elicit a biological response in vivo, handle with caution.

General Info

Function

Calcium/calmodulin-dependent enzyme implicated in smooth muscle contraction via phosphorylation of myosin light chains (MLC). Also regulates actin-myosin interaction through a non-kinase activity (By similarity). Implicated in the regulation of endothelial as well as vascular permeability. In the nervous system it has been shown to control the growth initiation of astrocytic processes in culture and to participate in transmitter release at synapses formed between cultured sympathetic ganglion cells. Critical participant in signaling sequences that result in fibroblast apoptosis.

Tissue specificity

Smooth muscle and non-muscle isozymes are expressed in a wide variety of adult and fetal tissues and in cultured endothelium with qualitative expression appearing to be neither tissue- nor development-specific. Non-muscle isoform 2 is the dominant splice variant expressed in various tissues. Telokin has been found in a wide variety of adult and fetal tissues.

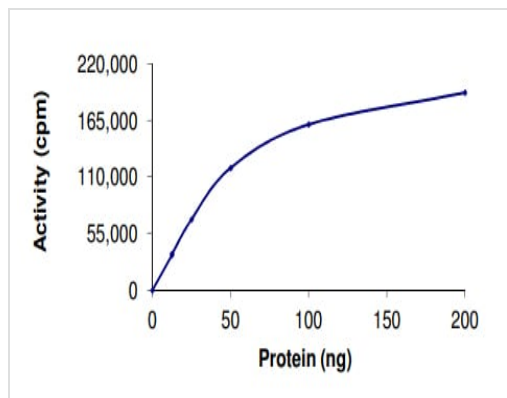
Sequence similarities

Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family.
Contains 1 fibronectin type-III domain.
Contains 9 Ig-like C2-type (immunoglobulin-like) domains.
Contains 1 protein kinase domain.

Post-translational modifications

MLCK is probably down-regulated by phosphorylation.
The C-terminus is deglutamylated by AGTPBP1/CCP1, AGBL1/CCP4 and AGBL4/CCP6, leading to the formation of Myosin light chain kinase, smooth muscle, deglutamylated form. The consequences of C-terminal deglutamylation are unknown.

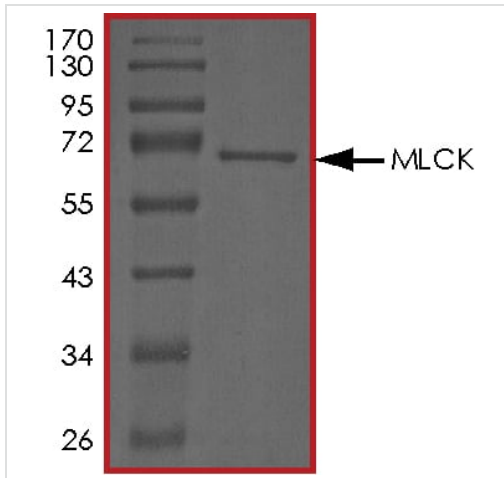
Images



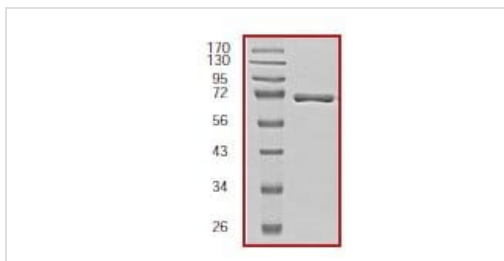
Functional Studies - Recombinant human Myosin light chain kinase/MLCK protein (ab55674)

The specific activity of Myosin light chain kinase/MLCK (ab55674) was determined to be 180 nmol/min/mg as per activity assay protocol

SDS PAGE analysis of ab55674



SDS-PAGE - Recombinant human Myosin light chain kinase/MLCK protein (ab55674)



SDS-PAGE - Recombinant human Myosin light chain kinase/MLCK protein (ab55674)

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